

Notice of Allowability

Application No.

10/789,449

Examiner

Dang T Nguyen

Applicant(s)

ZINK ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 26 February 2004.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 26 February 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

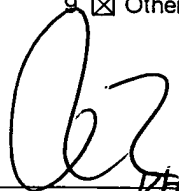
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 7/19/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Search history.


RICHARD ELMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

DETAILED ACTION

1. This action is responsive to the following communications: the Application filed on February 26, 2004 and the Information Disclosure Statement filed July 19, 2004.
2. Claims 1 – 20 are pending in this case. Claims 1, 10, and 15 are independent claims.

Information Disclosure Statement

3. The IDS filed on 07/19/04 has been considered.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

EXAMINER'S AMENDMENT

5. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Iannucci Robert on December 14, 2004.

The application has been amended as follows:

Abstract, line 2 changes "comprises" To - -includes- -

Claim 1, line 13 changes "atching" To - -latching- -

Claim 14, line 2 changes "voltage during" To - -voltage during- -

Allowable Subject Matter

6. Claims 1 – 20 are allowed.

7. The following is an examiner's statement of reasons for allowance:

With respect to claims 1 and 10, in addition to other elements in the respective claim, the prior art does not teach or suggest "a verify-program device arranged for saving a datum in one of the memory cells by repeating a verify-program cycle until the datum is saved in the memory cell, without exceeding N cycles, the verify-program cycle including reading the memory cell then applying a pulse of a programming voltage to the memory cell if the datum to be saved has a program logic value and if the datum read in the memory cell has an erase logic value; an erase verify device arranged for: supplying an erase verify signal having a determined value when the datum read in a memory cell during the first verify-program cycle of an operation of programming the memory cell, has an erase logic value; and latching the erase verify signal before applying the first pulse of programming voltage to the memory cell".

With respect to claim 15, in addition to other elements in the respective claim, the prior art does not teach or suggest "a first verify-program device having a first input connected to receive an input datum, a second input connected to the output of the first read circuit, and an output that supplies a program signal to program the datum into the selected memory cell; a first erase verify device having a first input connected to receive the input datum, a second input connected to the output of the first read circuit, and an

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output that supplies an erase verify signal having a value that reflects whether the input datum is equal to the datum read by the first read circuit”.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tran et al. (Patent No.: US 6,519,180 B2) discloses a verify-program cycle includes a verify cycle followed by a program cycle. A verify cycle is done first to inhibit the cell from the first programming pulse if the cell is verified, therefore preventing possible over-programming.

Di Zenzo et al. (Pub. No.: US 2003/0101390 A1) disclose a full internal erase-erase check algorithm involves many steps such as Pre-program, Pre-program Verify, Erase Verify, Erase, Depletion check, Compaction, Erase Verify.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Contact Information

10. Any inquiry concerning this communication from the examiner should be directed to Dang Nguyen, who can be reached by telephone at (571) 272-1955. Normal contact times are M-F, 8:00 AM - 4:30 PM.

Upon an unsuccessful attempt to contact the examiner, the examiner's supervisor, Richard Elms, may be reached at (571) 272-1869.

Any inquiry of a general nature or relating to the status of this application or

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proceeding should be directed to the receptionist, whose telephone number is (703) 305-3900. The faxed phone number for organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the Status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or EBC@uspto.gov.

Dang Nguyen 12/14/2004